

Name: **Dr. Y Chalapathi Rao**

Designation: Associate Professor

Department: E.C.E

Mail.I.D: chalu.8421@gmail.com, chalapathirao_y@vnrvijiet.in

Experience (in years): Teaching: 18 years Research: 12

AICTE Id: 1-4574030316

Date of Birth: 20-01-1984

Others (If any, Specify):



1. Educational / Technical qualifications:

S.No	Level (UG / PG / Ph.D)	Year of passing	Specialization
1	Ph.D.	February 2018	ECE-Wireless Sensor Networks
2	M.Tech.	2009	ECE -VLSI Design
3	B.Tech.	2005	ECE

2. Teaching and Learning:

2.1. Teaching Interests: Probability Theory and Stochastic Processes, Signals and Systems, Digital Signal Processing, Linear IC Applications, Digital IC Applications, Pulse and Digital Circuits, Electronic Devices and Circuits, Control Systems, Network Analysis, STLD, Digital Logic Design, Digital System Design, Basic Electronics, Wireless Communication and Networks and VLSI.

2.2. Novel Teaching & Learning Techniques adopted: WIT& WIL; POGIL, Project Based Learning.

2.3. Involvement in curriculum updating / Design: Yes

3. Co-curricular and Extra-Curricular Activities

3.1. Interests and Hobbies: Playing all Sports and Games, Watching Movies.

3.2. CCA/ECA Organized:

- TRINITY 2010 National level Technical Fest
- TECHWINGS 2012 National level Technical Fest
- ASCARYA 2015 Technical Fest
- GNAAN 2018 National level Technical Fest

3.3. CCA/ECA participated: Actively involved in Convergence, Annual day, Cultural day and Sports day.

3.4. Counseling and Mentoring Activity: Actively involving

3.5. Committees involved in:

Department level:

- As a NBA Coordinator, Department of ECE, VNR VJIET, 2018-19.
- Department Academic Coordinator (Curriculum design for B. Tech-ECE R18, R19 and R22 regulations from 2018 to till date)
- BOS Member, DAC, Department of ECE, VNR VJIET from 2019 to till date.
- As a IQAC and AQAR Coordinator, Department of ECE, VNR VJIET, 2018-20.
- BOS Member (3 Years, 2014-17) and Project-Coordinator at Anurag Engineering College.
- As a NBA Coordinator, Department of ECE, Anurag Engineering College, Kodad.
- As a NAAC Coordinator, Department of ECE, Anurag Engineering College, Kodad.

Institute Level:

- Sports Committee; R&D Coordinator

- As a Head of the department in ECE, KLR College of Engineering & Technology, Paloncha. (Nov. 2008-Dec. 2011).
- As a Head of the department in ECE, Bhimavaram Institute of Engineering & Technology, Bhimavaram. (Dec. 2011-June 2014).
- As a Head of the department in ECE, Guntur Engineering College, Yanamadala, Guntur. (July 2017-April 2018).

4. Conference / Workshop / Seminar / Guest Lectures:

4.1. Conducted: 8

4.2. Attended: 27

Conducted/Organized at VNR VJiet

S.No	Name of the Course / Summer School	Place	Duration	Sponsoring Agency
1	International Conference on Recent Trends in Microelectronics, Automation, Computing and Communication Systems IEEE-ICMACC-2022 (As a Organizing Committee Member)	VNRVJiet, Hyderabad	28/12/2022 to 30/12/2022	IEEE
2	ATAL Online Faculty Development Programme on "Challenges in adapting Machine Learning towards 5G/6G Communications"	VNRVJiet, Hyderabad	09/08/2021 to 13/08/2021	AICTE
3	FDP on "Sensor Network and IoT"	VNRVJiet and NIT Warangal	26/08/2019 to 31/08/2019	Electronics & ICT Academies, MeltY
4	FDP on "Embedded Systems & Interfacing Hand-on"	VNRVJiet and NIT Patna	10/06/2019 to 14/06/2019	Electronics & ICT Academies, MeltY
5	Open House 2019 Faculty Coordinator	VNRVJiet, Hyderabad	8-9 March 2019	VNRVJiet IEEE

Attended from VNRVJiet

S.No.	Name of the Course / Summer School	Place	Duration	Sponsoring Agency
1	FDP on "Embedded Systems & Interfacing Hand-on". From 10th to 14th June 2019	NIT Patna	One-week	Electronics & ICT Academies, MeltY
2	FDP on "Wireless and Mobile Communication". From 1st to 6th July 2019	NIT Warangal	One-week	Electronics & ICT Academies, MeltY
3	FDP on "VLSI Chip Design Hands-on using open-source EDA". From 8th to 12th July 2019	IIT Guwahati, NIT Patna	One-week	Electronics & ICT Academies, MeltY
4	FDP on "Python Programming with Industry Perspective". From 2nd to 6th December 2019	MNIT Jaipuri, NIT Patna	One-week	Electronics & ICT Academies, MeltY
5	FDP on "Deep Learning and Applications". From 9th to 13th December 2019	NIT Warangal, MNIT Jaipuri, NIT Patna	One-week	Electronics & ICT Academies, MeltY
6	Seventh International Conference on Transformations in Engineering Education	Anurag Group of Institutions,	Four Days	ICTIEE-2020

	(ICTIEE-2020) from 5th to 8th January 2020.	Hyderabad		
7	FDP on "Artificial Intelligence " from 11-05-2020 to 15-05-2020	MSME Technology Development Centre (PPDC), Meerut.	Five Days	AICTE-ATAL
8	FDP on "Research Paper & Project Proposal Writing" under IEEE Student Branch held on 15-May to 16-May, 2020	Sree Vidhya Niketan Engineering College, Titupathi	Two Days	IEEE
9	FDP on Tools for Online Classroom Post Covid-19 from 18 to 20 May 2020	P.V.P. Siddhartha Institute of Tech., Vijayawada	Three days	Codegnan IT Sol.
10	FDP on Introduction to Data Science from 18 to 22 May 2020	GEC, Guntur	Five Days	Codegnan IT Sol.
11	FDP on "Modern Research Trends in Communication, Signal Processing and VLSI/MEMS", organized by the Department of Electronics and Communication Engineering, from 19th to 23rd May 2020.	ALIET, Vijayawada	Five Days	AICTE-ATAL
12	Faculty development programme on "Machine learning for Signal Processing and VLSI" during 05-06-20 to 08-06-20	Anurag Group of Institutions, Hyderabad	Four days	AICTE-ATAL
13	One-week online Workshop on Effective online Teaching using ICT Tools From 29 June to 4th July 2020	VNR VJIET, Hyderabad	One Week	VNR VJIET
14	FDP on "Data Science and Analytics" from 2020-07-07 to 2020-07-11	Anurag Group of Institutions, Hyderabad	Five Days	AICTE-ATAL
15	Two-week Online Faculty Development Programme on "Wireless Communication Technologies for IoT" jointly organized by Electronics and ICT Academies held from 27 July to 07 Aug, 2020	IIT Guwahati	Two Week	Electronics & ICT Academies, MeltY
16	Two-week Online Faculty Development Programme on "Demystifying 5G RF ASICs" jointly organized by Electronics and ICT Academies held from 24 August to 04 September, 2020	IIT Guwahati	Two Week	Electronics & ICT Academies, MeltY
17	Training Programme on Digital tools for Writing, Authoring & Reviewing Manuscripts jointly organized during 21st September and 2nd October 2020	MNIT Jaipur, NIT Patna & IIT Guwahati	Two Week	Electronics & ICT Academies, MeltY
18	One week workshop on Mathematics for Data Science from 26 to 31 October 2020	VNR VJIET	One Week	IEEE VNR VJIET

19	FDP on " Internet of Things (IoT)" from 2020-12-15 to 2020-12-19	Anurag Group of Institutions, Hyderabad	Five Days	AICTE-ATAL
20	IEEE SPS summer school IoT for Bio-medical and Healthcare Applications From 28 to31 December 2020	VNR VJIET Hyderabad	Four Days	IEEE SPS
21	Machine Learning Master Class From 19 to 23 April 2021	Pantech Solutions	Five Days	Pantech Solutions
22	FDP on "Role of Mathematics in Future Technologies" from 2021-07-12 to 2021-07-16	Stanley College of Engineering and Technology for Women, Hyderabad	Five Days	AICTE-ATAL
23	FDP on "Faculty Development Program on Sensor Technology" from 06/09/2021 to 10/09/2021	University Institute of Engg. & Tech., Kurukshetra University, Kurukshetra	Five Days	AICTE-ATAL
24	Recent Advances in AI for Signal Processing from 28 to 31 December 2021	VNR VJIET	Four days	IEEE SPS
25	10th International Conference on Contemporary Engineering and Technology, 21 st and 22 nd May 2022	Chennai	Two Days	OSIET
26	6th International Conference on Electronics, Materials Engineering & Nano Technology, 2-4 December, 2022	IEEE, Kolkata	Three Days	IEEE

5.Academic Contribution and Research & Consultancy:

5.1. Invited Lectures: - 6

5.2. Articles/Chapters published in Books: - 02

5.3. Books published as an author or as editor: - 01

5.4. Projects Guided:

a) UG: 19 b) PG: 11

5.5. Research Interests: VLSI, Wireless Sensor Networks, Wireless Communications, and Embedded Systems

5.6. Ph.D students:

a) Enrolled: 01 (Full-Time PhD)

b) Submitted:

c) Awarded:01 (30th August 2021)

Evidence of actively involved in guiding of Ph.D. Scholars.			
S. No	Name of the Student/Scholar	Hall Ticket No.	Name of the University
1	G. Jagga Rao	24917047 (PhD Awarded)	JJTU, Rajasthan

5.7. Papers published in reviewed Journals: 38

S.No	Title of the Paper	Journal Name Vol.No. PP	ISBN/ISSN No.	Impact Factor/ Citation Index	National/ International
1	ECG beat classification using proposed pattern adaptive wavelet-based hybrid classifiers.	Signal, Image and Video Processing, Volume 17, Issue 3, 2023	1863-1711	Scopus/WoS	International
2	Recognition of Intent Using Light Detection and Ranging	Journal of Pharmaceutical Negative Results Volume13 Special Issue 3 2022	2229-7723	Scopus	International
3	Design of Optimized SRAM with Scaled Technology	Design Engineering, Issue: 9 2022, Pages: 5198 - 5209	0011-9342	Scopus	International
4	Milli meter Wave MIMO-OFDMA Scheme with MMSE-based VEMF in 6G Wireless Technology	Turkish Journal of Computer and Mathematics Education. Vol.12 No.3(2021)	4701-4707	Scopus	International
5	A Machine Learning Approach to Monitor Water Quality in Aquaculture	International Journal of Performability Engineering, December 2020, Volume 16(12): pg. 1845-1852.	0973-1318	Scopus 0.6	International
6	NPSF Testing and Diagnosis of SRAM using March-96N Algorithm	IJIEMR Transactions, Vol 10 Issue02, Pages: 9-17, Feb 2021	2456 – 5083	3.8	International
7	Real-Time Vehicle	JETIR January 2021, Volume 8,	2349-5162	5.87	International

	Tracking and Alerting System	Issue 1			
8	A Study of Future Wireless Communication: 6G Technology Era	Journal of Xidian University, VOLUME 14, ISSUE 11, 2020	1001-2400	5.4	International
9	Design Of High-Performance Adder Using Modified Gdi Based Full Adder	Journal of Mechanics of Continua and Mathematical Sciences, Vol.-15, No.-8, August (2020)	2454 -7190	2.82	International
10	Detection for 6g-Noma Based Machine Learning Optimization for Successive Adaptive Matching Pursuit Analysis	International Journal of Advanced Science and Technology Vol. 29, No. 3s, (2020), pp. 1803-1812	2005-4238	Scopus	International
11	Generation Of Electricity Using Piezoelectric Tyre	Aut Aut Research Journal Volume XI, Issue V, May/2020	0005-0601	5.2	International
12	Automation Of Industrial Parameters Using IoT with Raspberry Pi	Alochana Chakra Journal Volume IX, Issue IV, April/2020	2231-3990	6.3	International
13	Machine learning based copy move forgery detection with forensic psychology ultra-HD images	Test Engineering and Management, 81, Page No. 6401 – 6406, Dec,2019	0193-4120	Scopus	International
14	A Novel Approach for High Secured	The International journal of analytical and	0886-9367	6.3	International

	Image Transmission in 6G via MIMO-OFDMA process in NCHAOS Encryption Algorithm	experimental modal analysis Volume 9-Issue 10, pp. 1481-1492, Oct 2019			
15	Artificial Intelligence & Machine Learning Based Wireless MIMO-OFDM Communication system in JAG6G Analysis	International Journal of Research Volume 8-Issue 5, pp. 3740-3755, May2019	2236-6124	5.7	International
16	Low power and high-speed synchronous carry generate adder using modified gate diffusion input technique	International Journal of Engineering and Advanced Technology (IJEAT) Volume-8, Issue-2S2, January 2019	2249-8958	5.97 (Scopus)	International
17	Riverbed modeler simulation-based performance analysis of routing protocols in mobile Ad hoc networks	International Journal of Recent Technology and Engineering (IJRTE), Volume-7, Issue-6S, March 2019	2277-3878	5.11	International
18	Robust bit error rate optimization for MASSIVE MIMICEM system using channel coding method	International Journal of Innovative Technology and Exploring Engineering (IJITEE), Volume-8 Issue-4S2 March, 2019	2278-3075	5.15	International
19	Performance comparison for	International Journal of	2278-3075	5.15	International

	ripple carry adder using various logic design	Innovative Technology and Exploring Engineering (IJITEE), Volume-8 Issue-4S2 March, 2019			
20	An Efficient Test Data Compression Scheme Using Optimal Selective Huffman Coding	International Journal of Research, Volume 7-Issue 11, 2018 pp. 2107-3112.	2236-6124	5.7	International
21	Robust Analysis of Minimizing PAPR Reduction by Using Low Density Symbol Check	International Journal of Scientific Research in Computer Science, Engineering and Information Technology IJSRCSEIT Volume3, Issue5	2456-3307	4.03	International
22	Cluster-based Energy Efficiency Protocols for Wireless Sensor Networks	Asian Journal of Science and Technology, Vol. 08, Issue, 07, July 2017, pp.5144-5150	0976-3376	6.946	International
23	DDCD Algorithm based Energy Efficient Clustering for WSNs	Indian Journal of Science and Technology, Volume 9(29), August 2016, pp. 1-7	0974-5645 ijst/2016/v9i29 /85515	H index-22, SJR-0.27	International
24	Position Energy Spectral Clustering Algorithm based WSNs	JASC: Journal of Applied Science and Computations	1076-5131	4.6	International
25	Energy Efficient Clustering for	TELKOMNIKA Indonesian	2302-4046	H index-11, SJR-0.25	International

	Wireless Sensor Networks using EASSR	Journal of Electrical Engineering Vol. 15, No. 3, September 2015, pp. 554 ~ 568			
26	Energy Efficiency and Maximizing Network Lifetime for WSNs using ACO Algorithm	IJITEE, Vol. 5(2), July 2015, pp. 15-20	2278-3075	3.48	International
27	Performance Evaluation and Optimization of Wireless Sensor Networks using Firefly Algorithm	IJAER, Vol.10, Issue.10, May 2015, pp. 27191-27204	0973-4562	H index-9, SJR-0.13	International
28	Performance Evaluation of Cluster Tree Topology Based Wireless Sensor Networks	IASET-IJECE, Vol. 3, Issue 1, Jan 2014, pp. 17-33	2278-9901	3.2029	International
29	WSNs Based on Sugar Cane Industrial Monitoring & Control Using Energy Efficient Algorithm	IASET-IJECE, Vol. 2, Issue 4, Sep 2013, pp. 85-94	2278-9901	3.2029	International
30	WSN's based Oil Well Health Monitoring and Control Using ARM9 Processor	IJCT, Vol. 10, Issue 1, July 2013, pp. 1178-1185	2277-3061	0.435	International
31	Monitoring and Protection of Oil and Gas Condition in Industrial Using Wireless Sensor Networks	IJECCT, Vol.2, Issue 5, Sep 2012, pp. 213-218	2249-7838	1.2456	International
32	Rapid Spanning Tree and Cluster Head Routing in WSN's Using a	IJIRD, Vol.1, Issue 4, July 2012, pp. 216-230	2278-0211	0.5	International

	Hybrid Routing Protocol				
33	Energy Efficient Aggregation Algorithm for Wireless Sensor Networks	IJSER, Vol.3, Issue 7, July 2012, pp. 1-7	2229-5518	1.4	International
34	Non-Locally Centralized Sparse Representation for Image Super-Resolution With Spatial Information Filtering	International Journal of Advances in Applied Science and Engineering (IJAEAS) Vol-1, Iss.-4, 99-104	2348-1811	0.6	International
35	GSM-GPRS Based Intelligent Wireless Mobile Health Monitoring System for Cardiac Patients	International Journal of Engineering Research & Technology (IJERT), Vol 2, Issue 10	2278-0181	1.02	International
36	A Novel Approach of Kalman Filtering Algorithm for Speech Enhancement	International Journal of Electronics & Communication Technology (Iject), Vol 4, Issue 3	2230-7109	3.871	International
37	A New Concept of Face Identification Based on Logical Features and Nonlinear Mappings	International Journal of Electronics & Communication Technology (Iject), Vol 4, Issue 3	2230-7109	3.871	International
38	A Novel Approach for Automated Number Plate Recognition	International Journal of Electronics & Communication Technology (Iject), Vol 4, Issue 3	2230-7109	3.871	International

5.8. Papers presented at National / International conferences: 21

S.No	Title of the Paper	Names of the Conference/ Seminars	National/ International	Period
1	APD-BASED LASER RANGE-GATING SYSTEM	7th IEEE International Conference on Trends in Electronics and Informatics (ICOEI-2023)	International	11-13, April 2023
2	Vehicle Detection Using Panoramic 3D LiDAR	3rd International Conference on Management, Engineering and Social Science (ICMESS-2023)	International	6th April 2023
3	FPGA based smart home automation device controller	6th International Conference on Electronics, Materials Engineering & Nano Technology (IEMETech-2022)	International	2-4, December 2022
4	A deep learning approach lung segmentation and pneumonia detection from x-ray	International Conference on Recent Trends in Microelectronics, Automation, Computing and Communication Systems IEEE-ICMACC-2022	International	28-30 December 2022
5	Recognition of Intent using Light Detection and Ranging	12th International Conference on Science and Innovative Engineering 2022	International	5th June 2022
6	Smart Application Based Parking System using Internet of Things	10th International Conference on Contemporary Engineering and Technology 2022 (ICCET)	International	21st & 22nd May 2022
7	Design and Development of a novel Accident Detection and Emergency Reporting System	10th International Conference on Contemporary Engineering and Technology 2022 (ICCET)	International	21st & 22nd May 2022

8	Implementation of Low Power SRAM using CNTFET,	International Conference on Advances in Science, Engineering and Technology, ICASET 2021	International	29th & 30th December 2021
9	Real-Time Vehicle Tracking and Alerting System	1st International conference on "Internet of Things: The Eco System for sustainable growth" ICIoT-2020	International	23rd & 24th, December, 2020
10	Designing of Tg based novel 12T SRAM cell with reduced leakage power	International Conference on Advances in Computing and Communication Technologies (ICACCT), CMT CET, Hyderabad.	International	16th and 17th December, 2019
11	Machine learning based copy move forgery detection with forensic psychology ultra HD images	International Conference on Advances in Electronics and Communication Engineering (ICAECE-2019)	International	9th and 10th July, 2019
12	Designing of Tg based novel 12T 5mm cell with reduced leakage power	International Conference on Advances in Electronics and Communication Engineering (ICAECE-2019)	International	9th and 10th July, 2019
13	Low power and high-speed synchronous carry generate adder using modified gate diffusion input technique	International Conference on Advanced in signal processing, Power, Embedded, Soft computing, Communication and Control systems (ICSPECS-2019)	International	11th and 12th January, 2019
14	Riverbed modeler simulation-based performance analysis of routing protocols in mobile Ad hoc networks	International Conference on Advanced in signal processing, Power, Embedded, Soft computing, Communication and Control systems (ICSPECS-2019)	International	11th and 12th January, 2019
15	Robust bit error rate optimization for MASSIVE MIMICEM system using channel coding method	International Conference on Advanced in signal processing, Power, Embedded, Soft computing, Communication and Control systems (ICSPECS-2019)	International	11th and 12th January, 2019
16	Performance comparison for ripple carry adder using various logic design	International Conference on Advanced in signal processing, Power, Embedded, Soft computing, Communication and Control systems (ICSPECS-2019)	International	11th and 12th January, 2019
17	Performance Analysis of	IEEE 2nd International	International	19th & 20th

	Zigbee Wireless Sensor Networks using Riverbed Simulation Modeler	Conference on Inventive Systems and Control (ICISC 2018)		January, 2018
18	Minimize the power consumption and extend the lifetime of WSNs using Firefly algorithm	IEEE 2nd International Conference on Intelligent Sustainable Systems (ICISS 2017)	International	7th & 8th December 2017
19	Network Calculus Based Performance evaluation of Cluster-Tree Wireless Sensor Networks	National Conference on Communications, Antennas and Signal Processing, (NCCAS'17)	National	24th and 25th March, 2017
20	FFA routing algorithm to extend the lifetime and efficiency of wireless sensor networks	IEEE 2nd International Conference on Knowledge Collaboration in Engineering (ICKCE'15)	International	27th and 28th March, 2015
21	Efficient clustering and Energy optimization Algorithm for WSNs: An approach in environment monitoring system	IEEE Sponsored 2nd International Conference on Innovations in Information Embedded and Communication Systems (ICIIECS'15)	International	19th and 20th March, 2015

5.9. Sponsored research Projects: 02

S.No	Title	Agency	Period	Grant amount	Ongoing / Completed
1	Design and Development of Night Vision Imaging LIDAR and Laser 3-D Imaging System for Homeland Security and Other Surveillance applications in Defence	ER& IPR Scheme, DRDO	31-08-2021 to 31-08-2024	51,28,600/-	Ongoing
2	ATAL FDP on "Challenges in adapting Machine Learning towards 5G/6G Communications"	AICTE	9 th to 13 th August 2021	93,000/-	Completed

5.10 Patents: 05

S.No.	Title of invention	Patent File No. & Date of Filing	Status
1	IoT Based Smart Electrical Power Plug	2021105184 & 09-08-2021	Granted Patent, Patent Number: 2021105184 Date of Certificate Issue: 30-03-2022
2	Intelligent Wearable Brain Machine Interface To Assist Paralyzed People	202241011680 & 03-03-2022	Published Awaiting Request for Examination
3	AI and IoT Based Miniature Circuit Breaker	202241052573 23-09-2022	Published Awaiting Request for

			Examination
4	Security System for Women Safety and Real-Time Monitoring	202341018492 & 18-03-2023	Published on 31-03-2023. Awaiting Request for Examination
5	Artificial Intelligence Based Analysis of Smart Agriculture System Using Embedded IoT	202341018956 & 21.03.2023	Published on 31-03-2023. Awaiting Request for Examination

6. Awards / Honors received:

- Received Best Teacher award from “Dr. Sarvepalli Radhakrishnan best teacher award-2021”.
- Received Best Academician award from “IJIEMR-ELSEVIER SSRN Research awards-2020”.
- Received Three Silver medal from NPTEL courses for Analog Communications, Principles of Signals and Systems and Digital Circuits during the period 2018-2021.
- Editorial board member in SCIREA Journal of Electrical Engineering
- Editorial board member in Journal of VLSI Design and its Advancement from 2022
- Editorial board member in Journal of Advancement in Electronics Design from 2022
- Editorial board member in Journal of Advancement in Communication System from 2022
- Reviewer as an International Conference on Recent Trends in Microelectronics, Automation, Computing and Communication Systems IEEE ICMACC-2022
- Reviewer as an International Journal of Communication Systems
- Reviewer as an International Journal of IEEE ACCSESS
- Reviewer as an International Journal of Mathematics, Hindawai
- Awarded to Reviewed Three SCI indexed Journal papers in International Journal of Communication Systems in 2021
- Awarded to Reviewed Two SCI indexed Journal papers in International Journal of Communication Systems in 2020.
- **Senior Member of IEEE.**
- **Life-time Member of the Institution of Engineers (India)**
- **Life-time Member of ISTE**

7. Motto: Commitment to work, adaptability, and goal-oriented person, problem-solving abilities, Comfortable with teamwork, good coordination, and persuasion skills.